

NEW CARABIDAE, CHIEFLY FROM BORNEO AND CELEBES

(Coleoptera)

by

C. J. LOUWERENS

(Hilversum, Netherlands)

With the exception of one species from Java, sent to me by Mrs. M. E. VALSH (now in Geneva), the species of which the descriptions follow below, are collected by the late Mr. J. P. A. KALIS in Celebes, by Mr. A. M. R. WEGNER in Central East Borneo, and by Mr. M. A. LIEFTINCK in South Borneo.

I have added a few notes on two already known forms, and also a remark on the synonymy.

I have to thank Mr. WEGNER for the privilege to study his Bornean material and Dr. F. I. VAN EMDEN (London) for his advice and assistance.

Mr. WEGNER kindly allowed me to retain the types of a number of duplicates. The type specimens will ultimately be deposited in the Leiden Museum, Netherlands, while paratypes are being returned to the Museum at Bogor.

***Dinopelma wegneri* sp. n.**

Length about 8 to 9 mm; width about 3,5 mm.

Uniformly pale brownish to pale ferruginous with dark tipped femora.

Head over the eyes very little narrower than pronotum at widest point, ratio about 0,91; flat in front convex behind, strongly contracted to the fairly deep constriction of neck; eyes moderately large and moderately prominent; frontal furrows wide and deep, almost parallel, though a little curved behind, reaching mid-eye level; antennae about as long as length of head and pronotum taken together; surface smooth. Pronotum flat, quadrate; at widest point, about a little before middle, very little wider than long, width apex/base about 0,80; the bisetose sides finely bordered, gently and evenly rounded from apex to a point at about one fifth from base, from there running in a straight line to the right, sharply pointed posterior angles, anterior angles a little advanced and little round-

ed; apex a little emarginate, base straight; the lateral sulcus well developed, running from apex to a point at one fifth from base; median line fairly deep, not reaching apex; basal foveae large and deep, adjoining the angles; the foveae and the area along base and apex sparsely punctate, otherwise the surface is smooth. Elytra convex, suboval, width/width pronotum about 2,19 and length/largest width about 1,34; sides gently rounded, a little emarginate before apex, the border forming an obtuse angle at shoulder; striae moderately deep, finely punctate, but practically without punctures behind; third and fifth interval 3- and 1-punctate respectively. Microsculpture poorly developed, none on head and pronotum, the elytra here and there with superficial isodiametric meshes. Under-side: ligula distinctly emarginate; prosternal process bordered; pro- and mesepisterna rugosely punctate; metepisterna bordered, twice as long as wide; last ventral segment of ♂ and ♀ 2- and 4-setose respectively.

E. Borneo: Gunungsari, 95 m, 1 ex., 21.VIII.1956; Tabang, Bengen River, 125 m, 1 ex., 30.IX.1956, 5 ex., 1.X.1956, 2 ex., 2.X.1956, 1 ex., 3.X.1956, 1 ex., 8.X.1956, 1 ex., 9.X.1956 and 1 ex. 20.X.1956.

The type is from Tabang, Bengen River.

Dinopelma lineola ANDR., its nearest ally, is smaller with distinct pattern on the elytra, the second interval being darkest (but sometimes the dark elytral stripe is wanting altogether). Head more *Lebia*-like in shape, wider than pronotum; eyes much more convex; temples somewhat shorter, convex and strongly converging behind; frontal furrows more sharply defined, hardly exceeding anterior supraorbital. Pronotum wider than long, sides parallel to hind angles; base obliquely truncate to these, which are more obtuse; pronotum not punctured and tips of femora not darkened.

***Dinopelma intermedia* sp. n.**

Length: 8 mm; width about 2,75 mm.

Shiny piceous, mouth parts, antennae and legs more or less ferruginous.

Head flat in front, somewhat swollen behind, measured over the moderately large, prominent eyes a little wider than apex of pronotum, ratio about 1,20; antennae rather short, hardly reaching base of elytra; temples about as long as eyes, slightly tapering and curved in an obtuse, rounded angle to the deep neckconstriction; clypeus with two large, round and deep impressions, occupying nearly the whole length of the clypeus; frontal furrows wide and deep, reaching well beyond anterior supraorbital, which is placed in a large, deep pore, posterior seta far backwards near

neckconstriction; surface smooth. Pronotum convex, subcordate, width/length about 1,20 and width apex/width base about 0,80; the bisetose sides gently rounded in front, a little contracted behind with sharp posterior angles, projecting a little laterally, anterior angles distinct, rounded; both base and apex nearly right; the lateral sulcus near margin from apex to a little before base as in *Hexagonia*, but not quite so near the margin as in that genus; median line fairly deep, not reaching apex; the basal foveae large and deep, adjoining the angles; surface smooth. Elytra convex, not quite twice as wide as pronotum at widest point and one half longer than wide; the sides nearly parallel, a little emarginate before apex; the border forming an obtuse angle at shoulder; striae moderately impressed and moderately punctured; intervals nearly flat on disk, convex at sides and behind, impunctate, the third and fifth interval with 3 and 1 setiferous pores respectively. Head and pronotum smooth, the elytra with isodiametric meshes. Underside: ligula slightly emarginate; prosternal process flat, unbordered, broadly rounded behind; metasternal process longitudinally sulcate; metepisterna twice as long as wide, bordered; last ventral segment of ♂ with a single seta on each side of apex.

E. Borneo: Tabang, Bengen River, 125 m, 1 ex., 2.X.1956.

This interesting new species is between *Hexagonia* and *Dinopelma*. The ligula is as in *Dinopelma*, but the form of the pronotum is much more like that of *Hexagonia*, contracted to hind angles, though less strong. ANDREWES (Soc. Ent. Fr. 1932, p. 255) gives as main distinguishing character between the two genera the form of the lateral, pronotal sulcus, present in both, near and parallel to margin in *Hexagonia*, but in *Dinopelma* parallel and within the lateral border to a point distant about a fourth or fifth from base, thence turning outwards and joining the border. Here the lateral part of the pronotum fitting both ways, but perhaps better *Dinopelma*. All *Hexagonia* have a wider and flatter head, the pronotum much more contracted to base and a less smooth surface.

Dinopelma angustum ANDR. Soc. Ent. Fr. 1932, pp. 255 & 256.

Among the Carabidae, Mr. WEGNER brought home from his trip to Central East Borneo, there are 8 ex. of *D. angustum*. To the original description can be added, that the type and another ex. (both in the British Museum and examined by Dr. VAN EMDEN) have got the anterior pronotal, lateral seta as is the case in the examples, collected by Mr. WEGNER. The pore and seta in the posterior angles are absent. The hind angles of the pronotum are little variable, in some ex. the angle projects laterally as a small, sharp point. The sides of prosternum and proepisternum

na are clearly punctate, though not densely. Also some few scattered punctures on the mesepisterna.

Calleida spec. (fig. 1).

The accompanying drawing shows a *Calleida* from Celebes, Tjamba, 500 m, collected in 1938, in 3 ex. The colour is more or less dark red, the legs are black and the elytra bright, metallic green with a large, dark blue spot. The length is about 11 mm.

It forms one group with *femoralis* CHAUD. (India), *sultana* BATES (N. Burma) and *pallipes* ANDR. (Burma, India, Tonkin), the forms differing only slightly from one another according to the differences in geographical distribution.

C. sultana is extremely similar, only the elytral intervals are a little more convex and the flattened margin of the pronotum is broader anteriorly. *C. pallipes* is also very similar, but the pronotum more narrowed to base. *C. femoralis* has the elytral striae much deeper and more strongly punctured, the intervals much more convex.

According to ANDREWES too great importance has been attached to colour in this genus and all three may prove to be colour variants of one species.

Calleida lieftincki sp. n. (fig. 2).

Length 9 mm; width about 3,5 mm.

Shiny, very dark rusty red to almost piceous; two spots on vertex of head, antennae, side margins of pronotum and tarsi lighter; apices of antennal segments darker; elytra bright green, coppery at sides and behind.

Head wide, flat in front, convex behind, width/width apex of pronotum about 1,30; eyes large and strongly prominent, hind supraorbital at hind-eye level; frontal furrows moderately deep, more or less linear, a little diverging behind; antennae reaching a little beyond base of elytra; surface without punctures. Pronotum convex, subquadrate, width/length about 1,08 and width apex/base about 1,18; side margins narrowly explanate, gently and evenly rounded from apex to base, thence straight to hind angles, a little more contracted in front than behind, widest very little before middle; base bisinuate, sides and middle a little convex backwards; apex practically right; anterior angles indistinct, posterior angles a little obtusely rounded; median line finely impressed, reaching base and apex; basal foveae moderately large and moderately deep, not sharply defined, a finely impressed line from the foveae running parallel with and

distant of lateral groove to apex; the foveae, apex, basal area and sides with a very few scattered punctures. Elytra a little convex, width/length about 0.60 and width/width pronotum about 1.66; shoulders squarely rounded; sides parallel; apex truncate and slightly emarginate, outer angles with a minute spine; striae finely impressed and finely punctate; intervals a little convex and very superficially, sparsely and irregularly punctured, the third interval with two setiferous pores, one near base and one near apex. Microsculpture isodiametric throughout, hardly visible on head, a little more distinct on pronotum, the lines on the elytra very clearly engraved. Underside impunctate; metepisterna twice as long as wide in front; last ♂ ventral segment a little emarginate at middle, 4-setose at apex.

S. Borneo: Pemantan River, near Sampit, ult. VII.1953, M. A. LIEFTINCK.

Pronotum of *C. corporali* ANDR. from Sumatra as figured, longer and wider, much stronger contracted in front, sinuate behind, the posterior angles more rounded, etc. *C. terminata* WATERH., also from Borneo, has the pronotum broader, one sixth wider than long, the margins more strongly reflexed with the lateral groove broader and deeper, the disk with almost regular, conspicuous rugosities, anterior half of sides front angles strongly and much more evenly rounded; basal foveae deeper and larger, hind angles conspicuously projecting, the sides therefore markedly diverging towards them; second to fourth antennal segments somewhat darkened at bases; striae of elytra more finely, though distinctly punctate.

***Trichocoptodera maculata* gen. et sp. n. (figs. 4-7)**

Very near *Coptodera*, characterized by the more slender and narrow build, the relatively shorter labrum and narrower pronotum and especially by the pubescens on the whole body, though less distinct on the elytra upon which the fine hairs are apparently abraded for the greater part.

Length from 5,5 to 7 mm; width from 2 to 2,5 mm.

Form and elytral pattern as figured, head, a stripe on the middle of pronotum of varying width and elytra piceous to black, the four spots on the latter, palpi, antennae, sides of pronotum, narrowly margins of elytra and apex, elytral epipleura and legs yellowish, tibiae a little darker, labrum and clypeus yellowish to piceous; underside reddish brown with darker sides, metepisterna black, mandibles dark tipped; moderately shiny; body winged.

Head convex, wide, 1,28 width apex of pronotum; eyes large and prominent; two supraorbital pores and setae on each side, the posterior

t level with posterior edges of eyes; antennae reaching well beyond base of elytra, pubescent from and including apical half of fourth segment; surface of head finely and sparsely punctate and haired; frontal impressions moderately large and moderately deep, nearly circular; labrum a little longer than wide, leaving a tolerable part of mandibles visible, apical angles rounded, slightly emarginate in front, 6-setose, clypeus 2-setose, transverse, both labrum and clypeus very finely pubescent and very finely punctate; mandibles moderately long, sharply pointed, the upperside with undep longitudinal furrows, the right mandible with a small, sharp tooth on innerside; mentum without a tooth in the emargination, 2-setose; epilobes present; submentum 4-setose; ligula narrow, bisetose; paraglossae membranous, broad, rounded at apex, extending beyond ligula, the apices free; second segment of labial palpi plurisetose. Pronotum convex, transverse, width/length about 1,67, widest a little before middle; width apex/base about 0,88; side margins with a fine border, bisetose, widely explanate, rather broadly and strongly rounded in front, slightly sinuate before posterior angles, which are obtuse with rounded apex, anterior angles indistinct, both base and apex nearly right, very finely bordered, the sides of the former a little oblique; the median line very superficially cut; the transverse impressions little distinct; basal foveae moderately large and moderately deep, not sharply defined; surface sparsely pubescent with whitish hairs and here and there with a few scattered punctures. Elytra convex, width/length about 0,82 and width/width pronotum about 0,55, 9-striate, the basal striole in the first interval; striae moderately impressed, practically without punctures; the sides nearly parallel, though the elytra are distinctly wider behind middle, shoulders square, basal border narrow, entire, apex obliquely truncate and slightly emarginate, outer and inner angles rounded; intervals a little convex, finely and moderately punctate with punctures of different size, the third interval 2-punctate, the pores near base and apex respectively; the series of umbilicate pores at sides forming a nearly unbroken row; the fine pubescence here and there visible, but most of it apparently abraded. No microsculpture on head and pronotum, the lines on the elytra forming very distinct, moderately transverse meshes. Underside: segments of protarsi a little wider in the ♂ than in the ♀; the whole surface finely punctured and finely haired; prosternal process unbordered, circular; metepisterna twice as long as wide; last ♂ ventral segment with 1 seta on each side of apex, that of ♀ with 2 setae; claws finely pectinate.

Central W. Celebes: G. Tompu, Palu, 2700', 7 ex., VIII.1937, and Loda Palu, 4000', 1 ex., VIII.1937.

Genotype: *T. maculata* sp. n.

The type is from G. Tompa, Palu.

Coptodera piligera CHAUD. presumably also belongs to the new genus. Here also the pronotum is not so strongly transverse as in *Coptodera*, the body haired, but the hairs on upperside are much longer than in the new species.

***Dolichoctis tjambaensis* sp. n. (fig. 8)**

Length 4,75 mm; width about 2 mm.

Shiny black, mandibles, palpi, antennae, legs, tarsi and more or less side margins of pronotum and elytra red-brown.

Head convex, width over the large, prominent eyes/largest width pronotum about 0,87; frontal impressions parallel, superficial; the two supraorbitals on each side normally placed, the pores connected by a fine line; antennae short, reaching base of elytra; surface without punctures, a little less shiny than the elytra because of the strong microsculpture. Pronotum little convex, subcordiform, width/length about 1,52, widest at about middle, stronger rounded in front than behind so that width apex/base is nearly 0,83, the reflexed margins are moderately expanded, a little more behind and very weakly sinuate before the posterior angles, which are very little obtuse and slightly rounded at apex, anterior angles distinct and rounded; base straight with oblique sides, apex slightly bisinuate; basal foveae small, somewhat linear, rather deep, wider and deeper behind, more or less pointed in front and lying at equal distances from median line and side margin; transverse impressions and median line finely engraved; the single lateral seta at hind angle; surface very finely, transversely striate, impunctate, roughened and less shining than the elytra, the basal area uneven. Elytra convex, more than head and pronotum, subquadrate, length/width about 1,30 and width/width pronotum about 2,00; basal border narrow, shoulders squarely rounded, sides slightly compressed before middle, a little more rounded behind and very feebly sinuate before extreme apex, which is rounded; the impunctate striae moderately impressed, finely shagreened at bottom; intervals nearly flat, third interval without dorsal pores. Microsculpture very strongly developed, on head and pronotum nearly isodiametric, the meshes on the elytra, though very clearly visible, are less deeply engraved and moderately to strongly transverse. Lower surface: prosternal process unbordered; metepisterna a little longer than wide; sterna and ventral segments finely and sparsely pilose, but not or almost not along sides; last ventral segment of ♂ with two, that of ♀ with four setae at apex.

Celebes: Tjamba, 500 m, 2 ex., 11. 1938.

Of the 6 unspotted forms of the genus, viz. *expansicollis* BATES, *immaculata* REDT., *torquata* ANDR., *iridescens* LOUW., *convexus* ANDR. and *unicolor* EMD., the 4 first named species have two pronotal, lateral setae on each side. The new species is related to *unicolor* and *convexus*, both having the pronotal side margins unisetose, but the third interval of the elytra 2-punctate. In *unicolor* the pronotum is very little wider than long, stronger cordiform, the hind angles sharper, whilst in *convexus* the posterior angles of the pronotum are almost entirely rounded off. Moreover it is much bigger than the new species.

As to colour, it must be said that *gilvipes* DEJ. and *striatus* SCHM.-GOEB. occasionally occur with 2 spots, 1 spot or no spots at all on each elytron, but both have the lateral margins of the pronotum bisetose.

***Dolichoctis maculipennis* sp. n. (fig. 9)**

Length 5 mm; width 2,5 mm.

Shining black, elytra -in strong light- weakly iridescent, palpi, antennae, reflexed margins of pronotum, apices of femora, tibiae and tarsi yellowish brown; each elytron with a more or less rounded, ferruginous spot, covering intervals 2 to 4 a little before apex. There is no shoulder spot, but by strong power vague traces of a red spot are visible.

Head convex, width over the eyes/width pronotum about 1,22; eyes large and prominent; frontal foveae small, somewhat rounded, moderately deep; the two setae over the eyes normally inserted, the pores connected by a fine stria; antennae short, reaching a little beyond base of elytra; surface smooth. Pronotum convex, nearly equally contracted and rounded in front and behind without sinuation, widest point a little before middle, width/length 1,55; side margins moderately expanded and reflexed, unisetose, the seta placed at hind angles, which are obtuse and rather strongly rounded, anterior angles, though distinct, little advanced, round; apex as wide as base, the latter straight with slightly oblique sides; transverse impressions and median line finely engraved; basal foveae small and superficial; basal area somewhat uneven; surface finely, transversely striate without punctures. Elytra rather strongly convex, much more than head and pronotum, length/width 1,37 and width/width pronotum about 1,77, squarely rounded at shoulders; sides a little compressed before middle, dilated behind, slightly sinuate before apex, which is finely pointed; striae clearly impressed, impunctate; intervals flat to weakly convex, basal border narrow, third interval 2-punctate, the small pores lying in

the middle of the interval; the first pore a little behind middle, the second pore in the front part of the spot, the pore usually nearest to base is wanting. Microsculpture of head isodiametric, of pronotum strongly transverse with very narrow meshes, the elytra finely striate. Lower surface: mentum with a small pointed tooth in the emargination; prosternal process without border; metepisterna a little longer than wide in front; the sterna and ventral segments extremely finely and very sparsely pilose; last ventral ♀ segment with a small, triangular emargination at middle and with two setae on each side of apex.

W. Java: Mt. Papandajan, 1 ex., without date.

Of the 4 known Malayan species of *Dolichoctis*, which bear a single apical spot upon each elytron, *anceps* ANDR., *jacobsoni* ANDR. and *pumila* ANDR. have two pronotal, lateral setae on each side, whereas *globosa* ANDR. has the sides of the pronotum unisetose as is the case in the new species, but the elytra with deep, coarsely punctate striae.

D. jacobsoni occasionally possesses a well-developed shoulder spot too, at least in Java.

***Holcoderus elegans* sp. n. (fig. 10)**

Length 7,75 mm; width about 2,25 mm.

Black, upperside shining green, elytra with greater part of disk from purple-coloured to red coppery, when viewed in strong light and from different angle.

Head wide, convex, width over the eyes/largest width of pronotum about 0,85; eyes large and moderately prominent; frontal foveae shallow, parallel; vertex with a few longitudinal scratches along sides of eyes; antennae short, reaching base of elytra; surface very minutely and very sparsely punctate. Pronotum feebly subcordiform, convex, length/width 1,25, width apex/base about 0,93; the sides with a very narrow, reflexed border; from widest point, at about one third from apex, gently contracted in front, a little less and in a nearly straight line behind with a small nick just before hind angles, which are sharp and project very little laterally, anterior angles rounded, distinct; both base and apex bordered, the former a little produced backwards and with oblique sides, the latter nearly straight; the lateral setae are two in number on each side, one seta at widest point at about one third from apex, at that point the sides are slightly angulate, the hind seta just before the angle, the front angle bears an additional seta; median line pointed in front, truncate behind; the transverse impressions shallow; basal foveae rather deep, continuing as a fine line in front, parallel with side margins of pronotum to front

margin; surface very finely transversely striate and rather finely and densely punctate, the punctures becoming larger and often confluent at sides and in the foveae. Elytra convex, twice as long as wide, width/largest width of pronotum about 1,30, squarely rounded at shoulders, parallel at sides, slightly compressed a little before middle; apex deeply emarginate, inner angle round, outer angle obtusely angulate; basal border entire, rather narrow; striae rather wide and deep, 3 to 7 wider and deeper and coarsely punctate on basal third or fourth, the punctures becoming finer behind, 1 to 2 and 8 to 9 finely punctate over the whole length, 7 curving round behind the others to apex; intervals flat to slightly convex, especially near base, very minutely and sparsely punctate, third interval 3-punctate. Microsculpture: head with only traces of faint isodiametric meshes, pronotum with from isodiametric to strongly transverse meshes, on the elytra the lines form on average moderately transverse meshes, much longer and more clearly impressed than on pronotum. Underside very finely and sparsely punctured and pilose, prosternum somewhat coarser punctate, metepisterna twice as long as wide in front, last ventral ♀ segment with two setae on each side of apex, slightly emarginate at middle.

Central W. Celebes: Sidaonta, Palu, 4500', 1 ex., VIII, 1937.

H. gracilis OBERTH. is quite like the new species in build, otherwise coloured and with 4 pores in the third elytral interval. In *praemorsus* CHAUD. the elytra are broader, apart from the difference in the apex; *aeripennis* ANDR. and *alacer* ANDR. are much smaller and have the head wider than the pronotum, *alacer* without additional setae in the front angles of the pronotum. In *trichias* ANDR. the pronotum is less convex, the front angles narrowly truncate, as the strongest seta of the front angles produces a slight angle, hind angles more broadly flattened. (Pronotum not quadrisetose on each side, bisetose with several setulae in the front angles, 1 to 2 of them being stronger, hence probably the expression "4-setose".) *H. caeruleipennis* SLOANE was rather poorly described. The pronotum is apparently similar to that of the new species, the coloration (pronotum coppery, elytra blue) differs. It is also larger, 10,3 mm long.

SYNONYMIC NOTE

Dolichoctis maxillosus LOUW. (Tijdschr. v. Ent. 1949. 90. p. 49) is synonymous with *Dolichoctis unicolor* EMD. (Arb. m. t. Ent. B.-D. 1937, 4. p. 121).

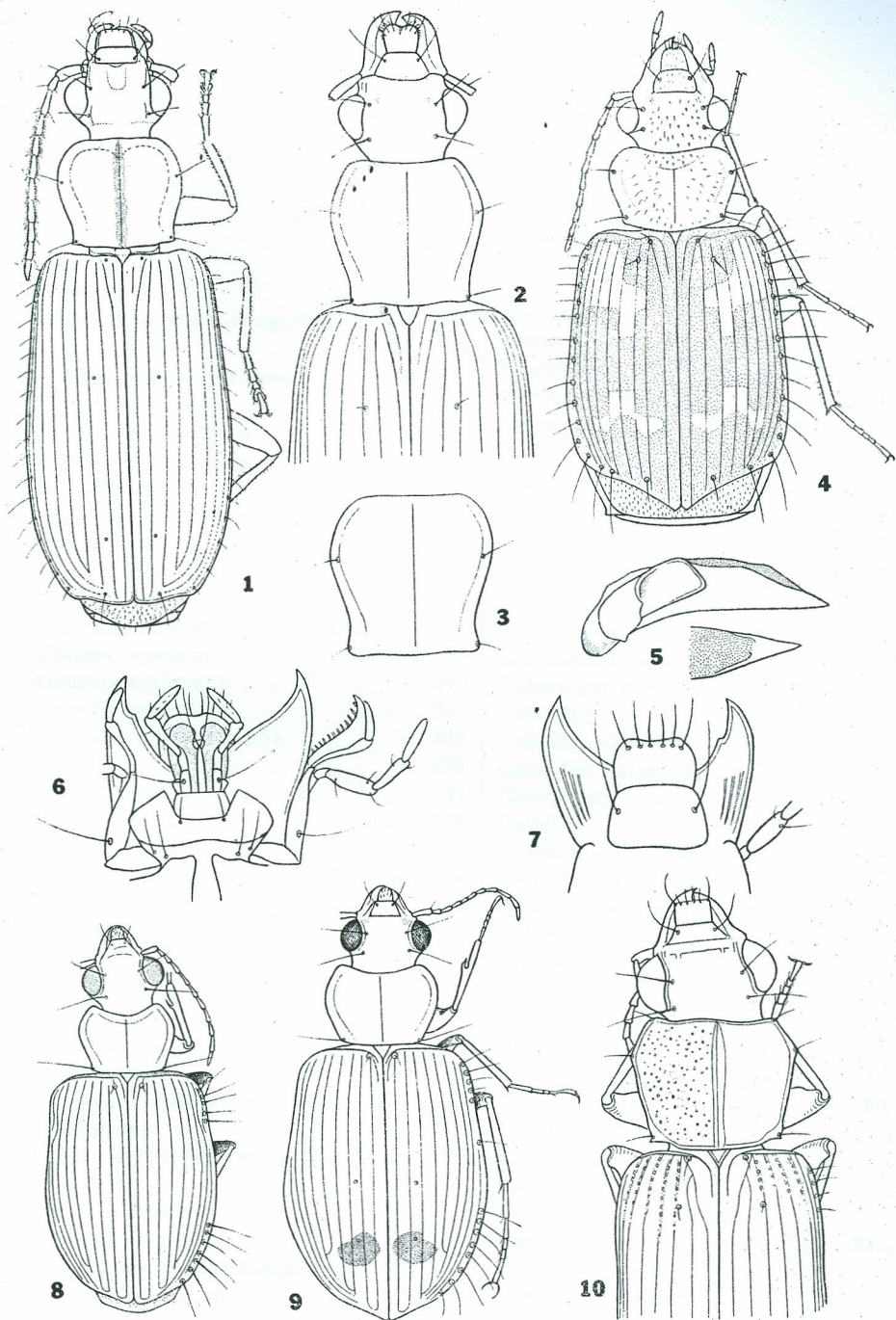


Fig. 1. *Calleida* spec., from Celebes. Fig. 2. *Calleida lieftincki* sp. n., type from S. Borneo, Sampit, head and pronotum. Fig. 3. *Calleida corporaali* ANDR., from E. Borneo, Long Petak, pronotum. Fig. 4. *Trichoptodera maculata* gen. et sp. n., paratype from Central Celebes, G. Tompu, Palu. Fig. 5. The same, male copulatory organ. Fig. 6. The same, mouth parts from beneath. Fig. 7. The same, mouth parts from above. Fig. 8. *Dolichoctis tjambaensis* sp. n., type from Celebes, Tjamba. Fig. 9. *Dolichoctis maculipennis* sp. n., type from Java. Fig. 10. *Holcoderus elegans* sp. n., type from C. Celebes, Sidaonta, Palu, head and pronotum.